

Nasopharyngeal tuberculosis

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Abstract

Isolated nasopharyngeal tuberculosis is a rare disease with very few cases having been reported in recent years. We report a case presenting in the United Kingdom with unilateral otalgia and otorrhoea.

Introduction

The upper respiratory tract is an unusual site for tuberculous infection. In a large series of 843 admissions for tuberculosis only 16 were found to have tuberculous infection of the upper respiratory tract (Rohwedder, 1974). Each case was secondary to active pulmonary tuberculosis and only five of these patients had pharyngeal/nasopharyngeal tuberculosis (0.6%). Case reports of isolated tuberculous lesions affecting the nasopharynx without any pulmonary involvement are very rare with most occurrences in countries in which tuberculosis is endemic (Martinson, 1967; Gnanapragasam, 1972; Sim and Ong, 1972; Raizada *et al.*, 1984; Narendran *et al.*, 1986; Waldron *et al.*, 1992). In the United Kingdom, where tuberculosis is an uncommon disease, there has been only one case report of isolated nasopharyngeal tuberculosis within the last 20 years (Harrison and Knight, 1986).

Case report

A 58-year-old caucasian woman presented with a history of otalgia for several months, poor hearing and scanty otorrhoea from her left ear. She had been seen prior to this at another hospital and had had a grommet inserted for a middle ear effusion. In

her teens she had pulmonary tuberculosis. Apart from this, her past medical history was unremarkable. A provisional diagnosis of otitis externa was made and she was treated with antibiotic ear-drops.

Her symptoms had not settled when she was reviewed after one month. Examination of the left ear was limited by gross swelling of the ear canal containing pus and the tympanic membrane could not be seen. On posterior rhinoscopy, an area of slough was identified in the left fossa of Rosenmuller. The patient was subsequently admitted to hospital for examination of the ear and nasopharynx under general anaesthetic. This revealed a grommet *in situ* in an otherwise normal left tympanic membrane and confirmed an area of slough in the nasopharynx, also on the left-side, which was biopsied. Histological examination of this specimen showed prominent, discrete, *non-caseating* epithelioid granulomata. In particular, it was reported that acid-fast bacilli and fungi were not seen.

One week later, she was re-admitted to hospital with severe left-sided otalgia, vertigo and vomiting. Her pinna was inflamed and the otorrhoea still present. She had no nystagmus and no signs of meningism. Tuning fork tests confirmed a left conductive hearing loss. A full blood count, urea and electrolytes and an erythrocyte sedimentation rate were unremarkable. Chest X-ray was normal. Further tests including serum angiotensin-converting-enzyme, immunoglobulins and auto-antibody levels failed to support a diagnosis of sarcoidosis. A Mantoux test was strongly positive at a strength of 1:10,000 and a CT scan showed



FIG. 1

CT scan showing a moderate size mass on the left-side mass of the nasopharynx.

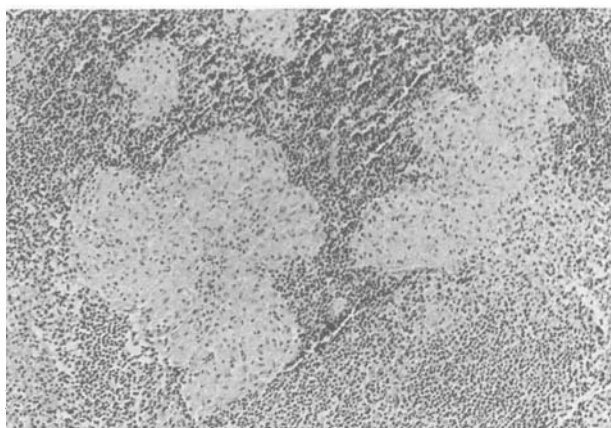


FIG. 2

Photomicrograph showing typical granulomata in biopsy.

a mass in the left-side of the nasopharynx (Fig. 1). She was treated with opiate analgesia for her pain and allowed home after a few days when her symptoms had settled.

Due to her persistent otorrhoea and the lack of a firm diagnosis further biopsies of the nasopharynx were taken under a second general anaesthetic. Histological analysis of these specimens was consistent with the previous results. A diagnosis was confirmed, by culture of the biopsy specimens, of nasopharyngeal tuberculosis (*Mycobacterium tuberculosis*). Anti-tuberculous treatment was then commenced which consisted of rifampicin, pyrazinamide and prednisolone.

A further examination of her nasopharynx performed five months later showed full resolution of the nasopharyngeal lesion.

Discussion

Isolated tuberculous infection of the nasopharynx is a rare condition. In a histopathological study, Belal (1951) found only one case with tuberculous foci in 110 routine adenoidectomy specimens. The most common presentation of nasopharyngeal tuberculosis is with a cervical lymphadenopathy. A series of 67 cases of tuberculous cervical lymphadenitis in which adenotonsillectomy was performed revealed 18 cases of tuberculous infection of the adenoids as the primary lesion (Mahindra *et al.*, 1981). Other case reports support this view (Sim and Ong, 1972; Raizada *et al.*, 1984; Waldron *et al.*, 1992). The next most common presentation is with nasal discharge or obstruction (Martinson, 1967; Gnanapragasam, 1972; Harrison and Knight, 1986; Narendran *et al.*, 1986; Waldron *et al.*, 1992). However, only three previously reported cases initially presented with otological symptoms, e.g. deafness due to secretory otitis media (Sim and Ong, 1972; Harrison and Knight, 1986; Waldron *et al.*, 1992).

This case presented with symptoms of persistent unilateral middle ear pathology. In adults a lesion within the nasopharynx must be considered as a possible cause of this. The differential diagnosis in such a case includes nasopharyngeal carcinoma, midline granuloma, Wegener's granuloma, sarcoid, tuberculosis, syphilis, lymphoma, fungal infections, leprosy and periarthritis nodosa. In order to obtain a definitive diagnosis it is necessary to perform an examination under anaesthesia of the nasopharynx with biopsy of any space-occupying-lesion. This is

clearly important in planning the appropriate management for the patient.

This case exemplifies the difficulty in reaching a diagnosis of tuberculosis, especially in such an unusual site. This diagnosis should always be considered where histopathological appearances suggest granulomatous disease, even where the histological appearances are of a non-caseating granuloma.

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